100

4005

DSP 102

I/O INTERFACE 114
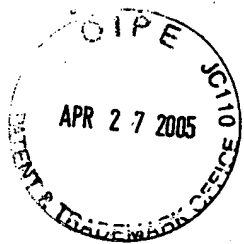
ROM 110

RAM 106

FIG. 1 (PRIOR ART)

250

Accelerator Engine 200

2003

DSP 102

RAM 106

ROM 110
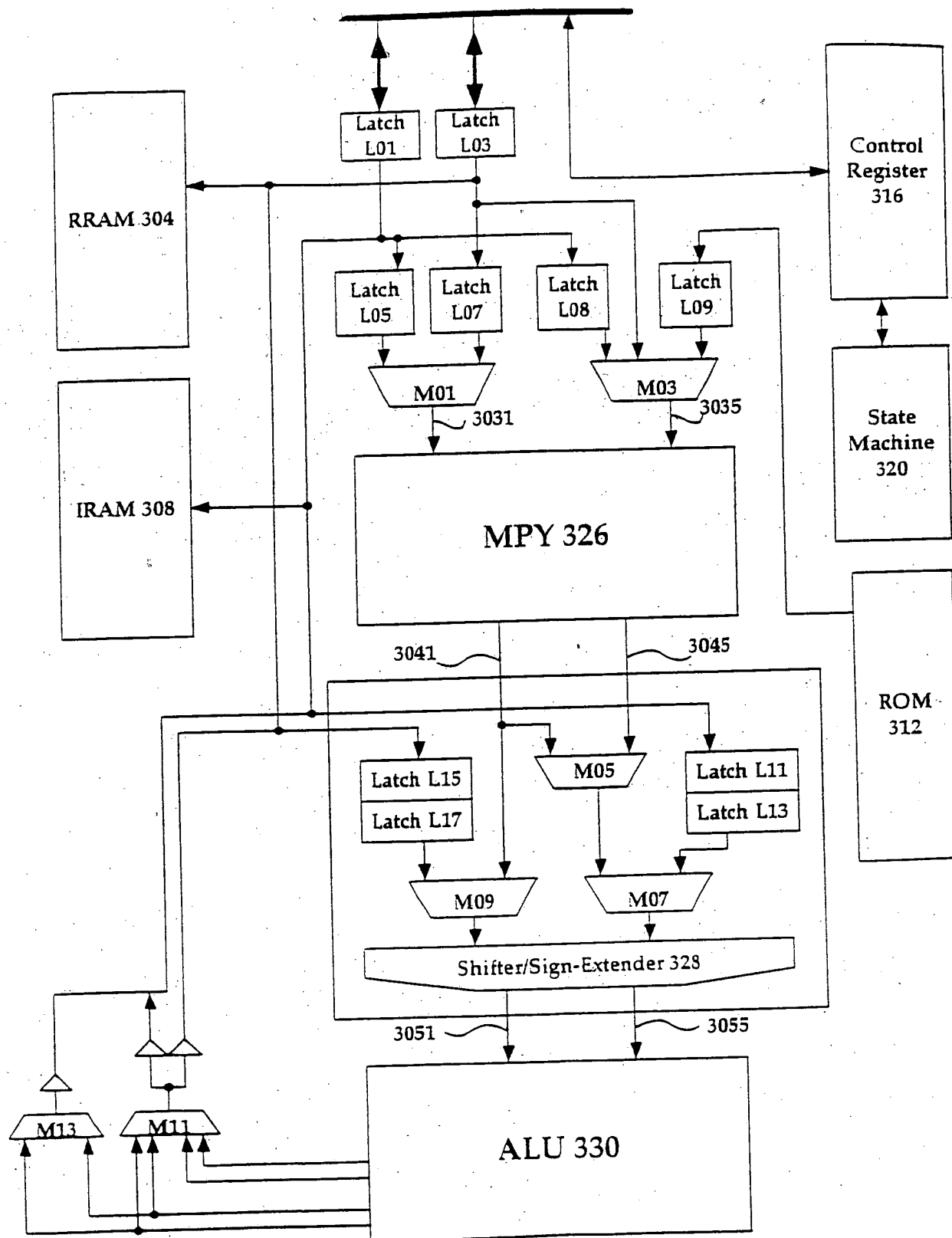
I/O INTERFACE 114

4005

FIG. 2

FIG. 3

200

Cycle	MPY 326	ALU A	ALU B	RRAM 304	IRAM 308	ROM 312
1				read b_r	read b_i	read c_r
2						read c_i
3	b_r*c_r					read c_i
4	b_i*c_i					read c_r
5	b_r*c_i					
6	b_i*c_r	$A=b_r*c_r$				
7		$A_0=A-(b_i*c_i)$				
8			$B=b_r*c_i$			
9			$B_0=B+(b_i*c_r)$			
10				write b_r	write b_i	
11						
12						

FIG. 4A